

IN THE CLAIMS:

The pending claims are set forth below and have been amended and/or cancelled, without prejudice, where noted:

1. (Cancelled)
2. (Currently Amended) The composition of claim ~~4~~ 51, wherein R' is a C₁ – C₄ alkyl group or an ~~mononuclear~~ aryl group which ~~may be~~ is substituted or unsubstituted and R'' is a C₁ – C₄ alkyl group or an ~~mononuclear~~ aryl group which ~~may be~~ is substituted or unsubstituted.
3. (Currently Amended) The composition of claim ~~4~~ 51, wherein M is a transition metal selected from groups 8 – 10 of the Periodic Table.
4. (Original) The composition of claim 3 wherein M is iron or cobalt and n is 2.
5. (Currently Amended) The composition of claim ~~4~~ 51, wherein A₁ is a an unsubstituted phenyl group or a mono-substituted, di-substituted or tri-substituted phenyl group.
6. (Currently Amended) The composition of claim 5 wherein A₁ is a phenyl group which is mono-substituted at the ~~para directly distal~~ position.
7. (Currently Amended) The composition of claim 5 wherein A₁ is a di-substituted phenyl group substituted at the ~~ortho proximal~~ positions with C₁ – C₄ alkyl groups or is a tri-substituted phenyl group substituted with a C₁ – C₄ alkyl group at the ~~para directly distal~~ position and C₁ – C₄ alkyl groups at the ~~ortho proximal~~ positions.
8. (Currently Amended) The composition of claim 7 wherein A₂ is a terphenyl group which ~~may be~~ is substituted or unsubstituted.
9. (Currently Amended) The composition of claim 8 wherein A₂ is a terphenyl group wherein the substituent phenyl groups are substituted on the primary ~~phenyl~~ benzyl group at the ~~proximal~~ ortho positions with respect to the coordinating nitrogen ion.
10. (Currently Amended) The composition of claim 9 wherein both of the substituted phenyl groups of A₂ are substituted at the para positions with C₁ – C₄ alkyl groups.
11. (Cancelled)

12. (Currently Amended) The composition of claim ~~44~~ 52, wherein M is iron or cobalt.

13. (Currently Amended) The composition of claim ~~44~~ 52, wherein A₁ is a di-substituted phenyl group which is di-substituted at the ortho ~~proximal~~ positions with C₁ - C₄ alkyl groups.

14. (Original) The composition of claim 13 wherein A₂ is a terphenyl group which may be substituted or unsubstituted.

15. (Currently Amended) The composition of claim 13 wherein A₁ is di-substituted at the ~~proximal~~ ortho positions with isopropyl groups.

16. (Currently Amended) The composition of claim ~~44~~ 52, wherein A₁ is di-substituted at the ~~proximal~~ ortho positions with C₁ - C₄ alkyl groups ~~and A₂ is a polynuclear-aromatic group.~~

17. (Currently Amended) The composition of claim 16 wherein A₂ is a terphenyl group wherein the substituent phenyl groups are substituted on the primary phenyl benzyl group at the ~~proximal~~ ortho positions with respect to the coordinating nitrogen ion.

18. (Currently Amended) The composition of claim 17 wherein both of the substituted phenyl groups of A₂ are substituted at the para positions with C₂ - C₄ alkyl groups having a higher molecular weight than the substituents of A₁.

19. (Cancelled)

20. (Currently Amended) The composition of claim ~~49~~ 53, wherein R₂ is an isopropyl ~~a-isopropylene~~ group.

21. (Original) The composition of claim 20 wherein R₄ is hydrogen.

22. (Currently Amended) The composition of claim ~~49~~ 53, wherein Q is chlorine.

23. (Cancelled)

24. (Currently Amended) The composition of claim ~~23~~ 54, wherein R₄ has a higher molecular weight than R₂.

25. (Currently Amended) The composition of claim ~~23~~ 54, wherein R_2 is a methyl group.

26. (Original) The composition of claim 25 wherein R_4 is an isopropyl or tertiary butyl group.

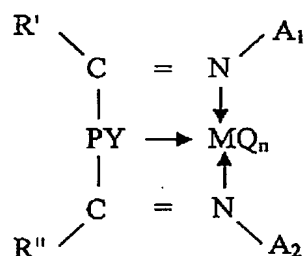
27. (Original) The composition of claim 26 wherein R_4 is a tertiary butyl group.

28. (Original) The composition of claim 27 wherein Q is chlorine.

29. (Original) The composition of claim 28 wherein R_1 is a methyl group.

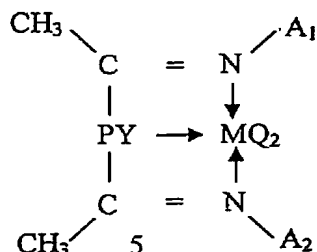
Claims 30-50. (Cancelled)

51. (New) An olefin polymerization catalyst precursor composition comprising a C_s symmetric catalyst precursor characterized by the formula:



wherein M is a transition metal selected from groups 8 to 10 of the Periodic Table; n is an integer of from 1 to 3; Q is a halogen or a C_1 to C_2 alkyl group; PY is a pyridinyl group, which is coordinated with M through the nitrogen atom of said pyridinyl group; R' is a C_1 to C_{20} hydrocarbyl group; R'' is a C_1 to C_{20} hydrocarbyl group; A_1 is a monoaromatic group, which is substituted or unsubstituted; and A_2 comprises multiple aromatic groups, which is substituted or unsubstituted, wherein the C=N bonded groups are excluded from A_1 and A_2 .

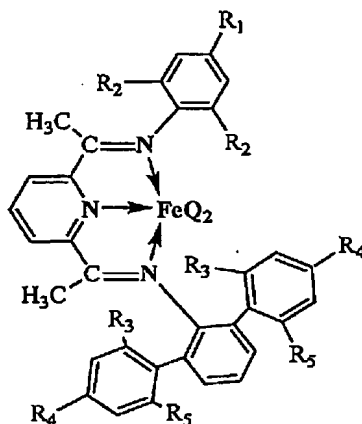
52. (New) An olefin polymerization catalyst precursor composition comprising a C_s symmetric catalyst component characterized by the formula:



COS-957 1st ROA

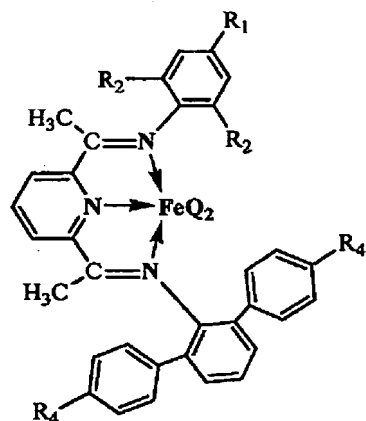
wherein M is a transition metal selected from the group consisting of iron, cobalt, nickel and copper; Q is a halogen or a C₁ – C₂ alkyl group; PY is a pyridinyl group, which is coordinated with M through the nitrogen atom of said pyridinyl group; A₁ is an aromatic group which is substituted or unsubstituted; and A₂ is an aromatic group, which is substituted to provide a structure which is sterically different from A₁ and wherein the C=N bonded groups are excluded from A₁ and A₂.

53. (New) An olefin polymerization catalyst precursor composition comprising a C_s symmetric catalyst component characterized by the formula:



wherein Q is a halogen or a C₁ – C₂ alkyl group; R₁ is a H or C₁ – C₄ alkyl group; R₂ is a C₁ – C₄ alkyl group; R₃ is hydrogen or a C₁ – C₄ alkyl group; R₅ is hydrogen or a C₁ – C₄ alkyl group which is the same as or different from R₃; R₄ is hydrogen or a C₁ – C₄ alkyl group.

54. (New) An olefin polymerization catalyst precursor composition comprising a C_s symmetric catalyst component characterized by the formula:



wherein Q is a halogen or a C₁ – C₂ alkyl group; R₁ is a hydrogen or a methyl group; R₂ is a methyl or isopropyl group; and R₄ is a C₁ – C₄ alkyl group.